

REMARKS

Claims 1, 10, 40 and 41 have been amended. Proper support for the amendments to the claims can be found in the specification, at least, at paragraph [0031]. Claims 1, 10, 15-23, 32, 34, 35, 38, 40 and 41 are pending. Claims 15-23, 32, 34 and 35 have been withdrawn from consideration. Claims 1, 10, 40 and 41 are the independent claims. No new matter is presented in this Amendment.

DOUBLE PATENTING:

Claims 1 and 10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 11 and 15 of U.S. Patent No. 6,797,435, hereinafter Kweon '435 in view of Amatucci et al. 5,705,291.

Applicants submit herewith a Terminal Disclaimer with respect to U.S. Patent No. 6,797,435. In view of the above, it is respectfully submitted that the rejection of claims 1 and 10 is overcome.

Claims 1 and 10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 12-17 of U.S. Patent No. 6,753,111, hereinafter Kweon '111.

Applicants submit herewith a Terminal Disclaimer with respect to U.S. Patent No. 6,753,111. In view of the above, it is respectfully submitted that the rejection of claims 1 and 10 is overcome.

Claims 1 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15, 28-30, 32-35 of copending Application No. 10/189,384 (U.S. Patent Application Publication No. 2003/0054250, hereinafter Kweon '250).

Applicants submit herewith a Terminal Disclaimer with respect to U.S. Patent Application No. 10/189,384. In view of the above, it is respectfully submitted that the rejection of claims 1 and 10 is overcome.

Claims 1 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 23-28 of copending Application No. 10/072,923 (U.S. Patent Application Publication No. 2003/0003352, hereinafter Kweon '352) in view of Amatucci 5,705,291.

Applicants submit herewith a Terminal Disclaimer with respect to U.S. Patent Application No. 10/072,923. In view of the above, it is respectfully submitted that the rejection of claims 1 and 10 is overcome.

Claims 1 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 and 25-37 of copending Application No. 09/897,445 (U.S. Patent Application Publication No. 2002/0071990, hereinafter Kweon '990).

Applicants submit herewith a Terminal Disclaimer with respect to U.S. Patent Application No. 09/897,445. In view of the above, it is respectfully submitted that the rejection of claims 1 and 10 is overcome.

Claims 1 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 and 25-37 of copending Application No. 10/627,725 (U.S. Patent Application Publication No. 2004/0018429, hereinafter Kweon '429).

Applicants submit herewith a Terminal Disclaimer with respect to U.S. Patent Application No. 10/627,725. In view of the above, it is respectfully submitted that the rejection of claims 1 and 10 is overcome.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 1, 10, 38 and 40-41 are rejected under 35 U.S.C. §103(a) as being unpatentable over Amatucci et al. (U.S. Patent No. 5,705,291) in view of the Japanese publication JP 09-

171813.

Applicants respectfully traverse this rejection for at least the following reasons.

Regarding the rejection of claim 1, it is noted that claim 1 recites, amongst other novel features, a positive active material composition for a rechargeable lithium battery, comprising: a positive active material comprising at least one lithiated compound; and at least one amorphous additive compound, uniformly mixed throughout the entire positive active material, selected from the group consisting of a thermal-absorbent element-included hydroxide, a thermal-absorbent element-included oxyhydroxide, a thermal-absorbent element-included oxycarbonate, and a thermal-absorbent element-included hydroxycarbonate.

Applicants respectfully assert that neither Amatucci nor JP '813, whether taken singly or combined, teach or suggest the novel features of independent claim 1.

Amatucci discloses a lithium intercalation cell in which the surfaces of lithiated particulates are passivated by coating or encapsulating the particulates in a layer including a composition comprising boron oxide, boric acid, lithium hydroxide, aluminum oxide, lithium aluminate, lithium metaborate, silicon dioxide, lithium silicate, or mixtures thereof. Amatucci further discloses that after the particulates are coated with the composition, annealing is performed at a temperature of about 400°C (column 2, lines 5-24).

That is, Amatucci discloses a composition used to coat the positive active material, which is evident from the fact that Amatucci discloses the processes of annealing.

Contrary to Amatucci, independent claim 1 recites a composition wherein the at least one amorphous additive compound, is uniformly mixed throughout the entire positive active material.

In other words, the additive compound is distributed throughout the entire positive active material, and not just coating the material, as taught by Amatucci.

Similarly, the JP '813 publication discloses a nonaqueous electrolyte secondary battery having its positive electrode active material or negative electrode active material covered with an inorganic ion conductive membrane.

Accordingly, the JP '813 publication also discloses a hydroxide used to coat the positive active material. Therefore, the hydroxide disclosed by JP '813 is not uniformly mixed throughout active material, but is rather coating the active material. Accordingly, JP '813 fails to cure the deficiencies of Amatucci and thus fails to teach or suggest the novel features of independent

claim 1.

Therefore, neither Amatucci nor the JP '813 application, whether taken singly or combined, teach or suggest the features recited in independent claim 1.

Regarding the rejections of independent claims 10, 40 and 41, it is noted that these claims recite substantially similar subject matter as claim 1. Thus, the rejections of these claims are also traversed for the reasons set forth above.

Accordingly, Applicants respectfully assert that the rejection of claims 10, 40 and 41 under 35 U.S.C. §103(a) should be withdrawn because neither Amatucci nor the JP '813 publication, whether taken singly or combined teach or suggest each feature of independent claims 10, 40 and 41.

Regarding the rejection of claim 38, it is respectfully asserted that the rejection of dependent claim 38 under 35 U.S.C. § 103(a) should be withdrawn at least because of its dependency from claim 1 and the reasons set forth above, and because the dependent claim includes additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claim 38 also distinguishes over the prior art.

Claims 1, 10, 38 and 40 are rejected under 35 U.S.C. §103(a) as being unpatentable over Amatucci et al. (U.S. Patent 5,705,291) in view of Yano et al. (U.S. Patent No. 5,827,494).

Applicants respectfully traverse this rejection for at least the following reasons.

As noted above, Amatucci fails to teach or suggest the novel features recited in independent claims 1, 10 and 40.

Yano discloses an electrode active material of batteries using an active material powder which comprises composite particles comprising Ni-hydroxide or solid solutions particles consisting essentially of Ni-hydroxide the surface of which is covered with a mixture of Co-hydroxide and the hydroxide of at least one metal selected from the group consisting of Al, MG (abstract). That is, Yano discloses a hydroxide used as the positive active material itself.

Contrary to Yano, the independent claims recite a positive active material and at least one amorphous **additive** compound, uniformly mixed throughout the entire positive active material, selected from the group consisting of a thermal-absorbent element-included hydroxide, a thermal-absorbent element-included oxyhydroxide, a thermal-absorbent element-included

oxycarbonate, and a thermal-absorbent element-included hydroxycarbonate. In other words, the composition includes two elements, a positive active material mixed with an additive compound.

Accordingly, it is respectfully asserted that Yano also fails to teach or suggest the novel features of independent claim 1, and therefore, fails to cure the deficiencies of Amatucci.

Regarding the rejections of independent claims 10 and 41, it is noted that these claims recite substantially similar subject matter as claim 1. Thus, the rejections of these claims are also traversed for the reasons set forth above.

Accordingly, Applicants respectfully assert that the rejection of independent claims 1, 10 and 40 under 35 U.S.C. §103(a) should be withdrawn.

Regarding the rejection of claim 38, it is respectfully asserted that the rejection of dependent claim 38 under 35 U.S.C. § 103(a) should be withdrawn at least because of its dependency from claim 1 and the reasons set forth above, and because the dependent claim includes additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claim 38 also distinguishes over the prior art.

Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over Amatucci et al. (U.S. Patent 5,705,291) in view of the Korean publication KR 1997-56445.

Applicants respectfully traverse this rejection for at least the following reasons.

As noted above, Amatucci fails to teach or suggest the novel features recited in independent claim 1.

The KR '445 publication discloses a Co-based hydroxide complex material added to an electrochemically active material to increase the capacity of a cell containing the same (abstract).

The KR '445 publication fails to cure the deficiencies of Amatucci and therefore, fails to teach or suggest the novel features of independent claim 1.

Therefore, neither Amatucci nor the KR '445 publication teach or suggest the features recited in independent claim 1.

Accordingly, Applicants respectfully assert that the rejection of independent claim 1 under 35 U.S.C. §103(a) should be withdrawn because neither Amatucci nor the KR '445 publication,

whether taken singly or combined teach or suggest each feature of independent claim 1.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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